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GENERIC NAMES IN THE FAMILY PLATYRHACIDAE  
AND THEIR TYPE SPECIES, WITH A CONSIDERA-  
TION OF THE STATUS OF *STENONIA* GRAY, 1842

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Although the number of students of the Diplopoda has been small, and these investigators generally competent zoologists, the nomenclature in the group has been badly confused. This has been due chiefly to two factors, the more important being a remarkable tendency on the part of the German workers to ignore the most basic ideas of type designation and to operate upon a principle of personal convenience rather than abide by the concept of priority. To a lesser extent, confusion has resulted from an inclination to disregard the works of earlier writers (a fault which, however, has by no means been exclusively European), and a great number of synonymic names has been established.

That the systematic study of the Diplopoda is still in its infancy need hardly be emphasized. A legion of genera and even families remain to be set up and integrated, during which process all of the names thus far proposed will, of course, have to be dealt with. Since determination of the type species of all genera is a primary consideration in such work, the following list has been prepared as the first step in the right direction. To the best of my knowledge, it is the only such compilation made for any group since Silvestri's 1896 list of the known genera of the class.

It may be explained by way of introduction that the family Platyrrhacidae is here understood to include only the species in which the edge of the paranota is not thickened or provided with a distinct marginal swelling, and in which the repugnatorial pore is usually removed some distance from the margin of the paranotum and set on its upper surface, usually in a flat, polished peritreme. In occasional species the pore may be set close to the edge, but in such cases the habitus of the animal is such to render it unmistakably related to typical members of the family. The preanal scale is subtrapezoidal in shape (distally truncate or concave), a feature which occurs in but one genus of the closely related family Euryuridae.

The only workers who have dealt extensively with the family are Cook (1896a, 1896b) and Attems (1914, 1938). Cook recognized a great number of genera on the basis of body form; Attems but a few, founded upon the male genitalia. However, Attems' treatment is over conservative and his artificial grouping of great numbers of

species is more unsatisfactory than Cook's equally overzealous analysis. I believe that the male genitalia do afford the only workable basis for generic divisions, but the limits of such genera will have to be drawn with more care and inclusive discrimination than Attems practiced. I have previously remarked the artificiality of his arrangement (1953, *Jour., Wash. Acad. Sci.*, 43: 301, footnote 2).

Perhaps the most misused generic names in this group are *Stenonia* Gray, *Acanthodesmus* Peters, *Platyrhacus* Koch, and *Odontodesmus* Saussure. I have devoted particular attention to resolving the status of each, and believe that the results will be satisfactory to most of my co-workers.

A word of caution is addressed to those who, like myself in the recent past, rely upon the authority of Carl Attems' encyclopaedic volumes on various milliped groups. Although Attems' work is unexcelled in its general usefulness, it is infested with minor inaccuracies, particularly of a bibliographic and nomenclatorial nature. It may be stated that all of his type designations in the three volume "Polydesmoidea" are subject to suspicion and none should be accepted without the verification of an examination of the literature involved. Attems' tendency to designate a species not originally included in a genus as its type was noteworthy. His concept of *anomen nudum* was also faulty, and he thus proposed many redundant new names to replace older ones which were, under the provisions of the International Rules of Zoological Nomenclature, validly proposed and occupied.

It is hoped that this account will prove to be of value and that it may serve to impress upon others the immediate necessity for meticulous bibliographic work before additional taxonomic studies are made. Because of its specific purpose, this paper does not endeavor to indicate generic synonymy, nor to set up new names. Such activity should properly be reserved for a general zoological treatment of the entire family.

I would particularly like to express my appreciation to Dr. J. G. Franclemont, whose knowledge of the principles of nomenclature and willingness to assist in their application to the present instances has greatly facilitated completion of the following account.

#### Family PLATYRHACIDAE Pocock

The spelling of both the family and its typical genus has been subject to considerable variation. Aside from obvious errors and misprints, the following four renditions have been observed:

Platyrhachidae Pocock, 1895, *Ann. Mus. Genova*, 34: 788.

Platyrhacidae Cook, 1896, *Brandtia*, no. 1, p. 1.

Platyrachidae Pocock, 1909, *Biol. Centr.-Amer., Diplop.*, p. 137.

Platyrhachidae Attems, 1938, *Das Tierreich*, 69: 202.

It is interesting to note that in 1938 Attems used the correct form *Platyrhacus* but continued to spell the family name with an extra "h", *Platyrhachidae*. The generic name has been observed to vary as follows: *Platyrhacus* Koch, 1847, *Syst. Myriap.*, p. 58.

*Platyrhachus* Pocock, 1894, *Weber's Reise Niederl.-Ost. Ind.*, 3: 343.

*Platyrhachus* Pocock, 1895, *Ann. Mus. Genova*, 34: 788.

*Platyrhachis* Silvestri, 1897, *Abh. Mus. Dresden*, 6 (9): 19.

*Platyrhacus* Attems, 1897, *Abh. Senckenb. Ges.*, 23: 490.

Platyrachus Pocock, 1909, Biol. Centr.-Amer., Diplop., p. 137.

ACANTHODESMUS Peters, 1864, Monats. Preuss. Akad. Berlin, p. 547.

Proposed with five species.

Type: *Polydesmus (Acanthodesmus) pilipes* Peters, 1864, by subsequent designation of Silvestri, 1896.

Peters treated 79 species in his paper under the name *Polydesmus* Latreille, disposing of them among 12 subgenera. The platyrhacid forms were grouped under *Odontodesmus* Saussure and *Stenonia* Gray (of which *Platyrhacus* Koch was given as a synonym). Fourteen species were thus listed in the subgenus *Stenonia* until, after the description of *P. scutatus* Peters, the following paragraph was inserted:

“Wenn man die Polydesmi, die bisher sehr vernachlässigt sind, erst genauer kennen wird, müssen diese durch die Dornen der Basalglieder der Beine ausgezeichneten Arten generisch von den anderen *Stenonia* geschieden werden und schlage ich für dieselben den Namen *Acanthodesmus* vor.”

Peters obviously mistook the sterna spines to be projections of the coxae. The name *Acanthodesmus* thus originally included all of the species of the subgenus *Stenonia* in Peter's list which have sternal spines, and not just *P. pictus*, which was the species immediately following the diagnosis.

ACISTERNUM Silvestri, 1896, Ann. Mus. Genova, 36: 190.

Monobasic.

Type: *Platyrhacus monticola* Pocock, 1894, by original designation.

ARCYDESMUS Cook, 1896, Brandtia, no. 12, p. 54.

Monobasic with a new species.

Type: *Arcydesmus comptus* Cook, 1896, by original designation.

AYMARESMUS Chamberlin, 1941, Bull. Amer. Mus. Nat. Hist., 78:

Proposed with seven new species.

Type: *Aymaresmus tapichus* Chamberlin, 1941, by original designation.

BARYDESMUS Cook, 1896, Brandtia, no. 12, p. 53.

Monobasic with a new species.

Type: *Barydesmus kerri* Cook, 1896, by original designation.

CRADOESMUS Cook, 1896, Brandtia, no. 1, p. 3.

Monobasic.

Type: *Platyrhacus subspinosus* Pocock, 1894, by original designation.

CYRTORHACHIS Silvestri, 1896, Ann. Mus. Genova, 36: 190.

Monobasic.

Type: *Platyrhacus subalbus* Pocock, 1894, by original designation.

CYPHORRHACUS Cook, 1896, Brandtia, no. 12, p. 52.

Monobasic with a new species.

Type: *Cyphorrhacus andinus* Cook, 1896, by original designation.

DERODESMUS Cook, 1896, Brandtia, no. 1, p. 1.

Monobasic with a new species.

Type: *Derodesmus flagellifer* Cook, 1896, by original designation.

DICRODESMUS Silvestri, 1896, Ann. Mus. Genova, 36: 190.

Monobasic.

Type: *Platyrhacus bidens* Pocock, 1894, by original designation.

DIONTODESMUS Pocock, 1897, Ann. & Mag. Nat. Hist., (6) 20: 443.

Proposed with two new species.

Type: *Diontodesmus woodfordi* Pocock, 1897, by original designation.

- DYNESMUS Chamberlin, 1941, Bull. Amer. Mus. Nat. Hist., 78:  
 Monobasic with a new species.  
 Type: *Dynesmus iquitus* Chamberlin, 1941, by original designation.
- ERNOSTYX Chamberlin, 1941, Bull. Amer. Mus. Nat. Hist., 78: 497.  
 Proposed with three new species.  
 Type: *Ernostyx moyobombus* Chamberlin, 1941, by original designation.
- EURYDIRORHACHIS Pocock, 1897, Ann. & Mag. Nat. Hist. (6) 20:  
 435.  
 Proposed with two new species.  
 Type: *Eurydirorhachis dulitensis* Pocock, 1897, by present designation.
- EUTRACHYRHACHIS Pocock, 1897, Ann. & Mag. Nat. Hist. (6)  
 20: 441.  
 Proposed with two species.  
 Type: *Eutrachyrhachis victoriae* Pocock, 1897, by original designation.
- HAPLORHACUS Attems, 1914, Arch. Naturg., 80 A (4): 273.  
 Proposed with seven species.  
 Type: *Platyrhacus doryphorus* Attems, 1899, by subsequent designation of Attems, 1932.  
 In 1938 (Das Tierreich 69: 281) Attems overlooked his own earlier selection and stated that *Platyrhacus haplopus* Attems, 1897, is the type species of this genus.
- HARPODESMUS Cook, 1896, Brandtia, no. 1, p. 3.  
 Monobasic.  
 Type: *Platyrhacus laticollis* Pocock, 1894, by original designation.
- HOPLURORHACHIS Pocock, 1897, Ann. & Mag. Nat. Hist. (6) 20:  
 437.  
 Proposed with two new species.  
 Type: *Hoplurorhachis Everetti* Pocock, 1897, by original designation.
- ILODESMUS Cook, 1896, Brandtia, no. 1, p. 1.  
 Monobasic.  
 Type: *Polydesmus Meyenii* Brandt, 1841, by original designation.
- LEUCODESMUS Cook, 1896, Brandtia, no. 1, p. 3.  
 Monobasic.  
 Type: *Platyrhacus Weberi* Pocock, 1894, by original designation.
- LEURODESMUS Cook, 1896, Brandtia, no. 1, p. 2.  
 Monobasic.  
 Type: *Polydesmus sumatranus* Peters, 1864, by original designation.
- MNIODESMUS Cook, 1896, Brandtia, no. 1, p. 2.  
 Monobasic with a new species.  
 Type: *Mniodesmus crossotus* Cook, 1896, by original designation.
- NANORHACUS Cook, 1896, Brandtia, no. 12, p. 54.  
 Monobasic.  
 Type: *Platyrhacus luciae* Pocock, 1894, by original designation.
- NYSSODESMUS Cook, 1896, Brandtia, no. 12, p. 53.  
 Monobasic with a new species.  
 Type: *Nyssodesmus alboalatus* Cook, 1896, by original designation.
- ODONTODESMUS Saussure, 1860, Mem. Soc. Geneve, 15 (2): 328.  
 Proposed with two species.  
 Type: *Polydesmus javanus* Saussure 1859, by subsequent designation of Silvestri, 1896.

OZORRHACUS Attems, 1932, Res. Sci. Voy. Ind. Or. Neerl., 3 (12):14.

Proposed with eight species.

Type: *Platyrrhacus katantes* Attems, 1899, by original designation.

Overlooking his original proposal of this name in 1932, Attems later (1938, Das Tierreich, 69: 253) proposed it again as a new subgenus, citing the same type and including the same species.

PARAZODESMUS Pocock, 1898, in: Willey, Zool. Results, 1: 68.

Monobasic with a new species.

Type: *Parazodesmus verrucosus* Pocock, 1898, by original designation.

PHRACTODESMUS Cook, 1896, Brandtia, no. 1, p. 1.

Monobasic.

Type: *Polydesmus subvittatus* Peters, 1864, by original designation.

PHYODESMUS Cook, 1896, Brandtia, no. 1, p. 1.

Proposed with seven species.

Type: *Polydesmus pictus* Peters, 1864, by original designation.

PLATYRRHACUS Koch, 1847, Syst. der Myriap., p. 131.

Proposed with three species.

Type: *Platyrrhacus scaber* Koch, 1847, by subsequent designation of Silvestri, 1896 (*See below.*)

PLEORRHACUS Attems, 1914, Arch. Naturg., 80 A (4): 263.

Proposed with 32 species.

Type: *Platyrrhacus mediotaeiniatus* Attems, 1914, by subsequent designation of Attems, 1932.

Although *mediotaeiniatus* was not formally published as a new species until 1915, the name first appeared in a key to the forms of *Pleorhacus* in Attems' 1914 paper on Indo-australian myriapods. It was there well differentiated from its congeners and a type locality was cited, so that the species can be considered as dating from 1914.

PLUSIOPORODESMUS Silvestri, 1898, An. Mus. Buenos Aires, 6: 64.

Monobasic with a new species.

Type: *Plusioporodesmus bellicosus* Silvestri, 1898, by original designation.

POLYDESMORHACHIS Pocock, 1897, Ann. & Mag. Nat. Hist. (6) 20: 445.

Monobasic with a new species.

Type: *Polydesmorhachis atratus* Pocock, 1897, by monotypy.

PROASPIS Loomis, 1941, Journ. Washington Acad. Sci., 31: 193.

Monobasic with a new species.

Type: *Proaspis aita* Loomis, 1941, by original designation.

PRODESMUS Cook, 1896, Brandtia, no. 1, p. 3.

Monobasic.

Type: *Platyrrhacus submissus* Pocock, 1894, by original designation.

PSAMMODESMUS Cook, 1896, Brandtia, no. 12, p. 52.

Monobasic with a new species.

Type: *Psammodesmus cos* Cook, 1896, by original designation.

PSAPHODESMUS Cook, 1896, Brandtia, no. 1, p. 2.

Proposed with two species.

Type: *Polydesmus concolor* Peters, 1864, by original designation.

RHYPHODESMUS Cook, 1896, Brandtia, no. 12, p. 54.

Monobasic with a new species.

Type: *Rhyphodesmus terminalis* Cook, 1896, by original designation.



SPILODESMUS Cook, 1896, Brandtia, no. 12, p. 54.

Monobasic with a new species.

Type: *Spilodesmus exsul* Cook, by original designation.

STENONOIDES Pocock, 1897, Ann. & Mag. Nat. Hist. (6) 20: 430.

Proposed with four new species.

Type: *Stenonoides Catorii* Pocock, 1897, by original designation.

TIRODESMUS Cook, 1896, Brandtia, no. 12, p. 53.

Monobasic.

Type: *Polydesmus fimbriatus* Peters, 1864, by original designation.

XERODESMUS Cook, 1896, Brandtia, no. 1, p. 2.

Monobasic with a new species.

Type: *Xerodesmus dratus* Cook, 1896, by original designation.

ZODESMUS Cook, 1896, Brandtia, no. 1, p. 3.

Monobasic.

Type: *Stenonia tuberosa* Pocock, 1894, by original designation.

#### Further Notes on *Platyrrhachus scaber* Koch

It has long been considered that this name dated from the description of *Polydesmus scaber* by Perty in 1823, although in 1896 its author was stated by Silvestri to be C. L. Koch. Although I have not been able to find a copy of Perty's original description, the brief description given in 1847 by Gervais and the locality cited (the mountains of Minas Gerais, Brazil) both indicate that Perty's species is a chelodesmoid (leptodesmoid) rather than platyrrhachid form. Koch's name, therefore, is not a junior synonym of Perty's, and dates from 1847.

In my 1953 paper on *Psammodesmus* (Jour. Wash. Acad. Sci. 43: 300), I discussed the application of *Platyrrhachus* to a South American Genus, suggesting the restriction of the name to ". . . that genus which is most numerous in species and has the widest range. . . . The group which most readily qualifies is that including *clathratus*, *bilineatus*, *propinquus*, *tenebrosus*, and their close relatives."

This somewhat empirical resolution of the matter has turned out to be more satisfactory than I could have anticipated two years ago. Since then, I have had access to a copy of Koch's "Die Myriapoden" in which the type of *scaber* is illustrated and fully described. And, since this species, upon which the genus rests, is not the same as Perty's earlier one, the matter of its identity becomes much easier of determination. Koch figures and describes an animal which is brownish-gray with two paramedian yellowish dorsal stripes. A survey of the world literature reveals that less than 15 species with this type of coloration have been described. All are from the upper drainage basin of the Amazon River, in Peru, Ecuador, and Colombia, and with two exceptions, all belong to the group of which I cited examples above! I am now inclined to believe that when the diplopod fauna of this region has been thoroughly worked out, it will become possible to allocate the name *scaber* to a species with considerable confidence of accuracy.

#### THE STATUS OF STENONIA GRAY, 1842, AND A SUGGESTION OF ITS POSSIBLE IDENTITY

Since the time of Gervais' treatment of the myriapod groups in Walckenaer's *Historie Naturelle des Insectes* (1847), the generic name *Stenonia* of Gray has been regarded as applicable to one of the platy-

rhacid groups, and was subsequently used in that sense by Saussure (1859) and Peters (1864) as well as others. I believe, however, after considerable deliberation, that the name as defined by its subsequently designated type species, is not to be included in the Platyrhacidae.

*Stenonia* was proposed in R. B. Todd's *Cyclopaedia of Anatomy and Physiology* (1842), in a classification of the diplopods clearly stated to be written by J. E. Gray. The name was very briefly diagnosed<sup>2</sup> and proposed without any included species. We can infer only that the name was based on one or more polydesmoid species in which the lateral edges of the paranota are incised or dentate. Gray himself disregarded the name in subsequent work, such as his catalog of the myriapods in the British Museum, published in 1844. Various other workers have accepted or rejected the name, and a considerable amount of confusion has arisen concerning its application. At the present, it appears to be disregarded or forgotten. In 1896 (*Brandtia*, 12: 51) Cook set a precedent in stating that *Stenonia*, having had no type species assigned by its author, is a *nomen nudum* and can be neglected.

*Stenonia*, however, is not a *nomen nudum*, since the name was accompanied by a brief description. The first species associated with the generic name were *Iulus dentatus* Olivier 1792, *Polydesmus Mexicanus* Lucas 1840, *Polydesmus bilineatus* Lucas 1840, and *Polydesmus Dunalii* Gervais 1844. These were all regarded as forms of *Stenonia* by Gervais in 1847, when he wrote (*op. cit.*, p. 95):

"4. Certaines espèces ont les caractères des précédentes, mais les carènes de leurs segments, au lieu d'être plus ou moins épaissies, sont au contraire minces et denticulées, et elles ont leurs pores répugnatoires à la face supérieure. Ce sont les *Stenonia* de M. Gray.

"*Polydesmus dentatus*, *Mexicanus*, *bilineatus*, *clathratus*, *Dunalii*, etc."

In the text of his paper, however, Gervais continued to refer to the five species cited as members of the genus *Polydesmus*. From his usage it is clear that he considered such Gray names as *Fontaria* and *Stenonia* as synonyms (rather than subgenera) of his *Polydesmus*, a fact which does not militate against his reference of species to a synonymized name as an accountable nomenclatorial action.

Of these five originally included species, no selection of a type was made until 1896, when Cook wrote (*op. cit.*, p. 51):

"If we accept for *Stenonia* a type species proposed by a later writer, it must be *Polydesmus dentatus* (Olivier), a species not known to Gray, a result certainly not in the interest of either justice or clearness."

While there is much to be said for Cook's sentiment in this instance, there is no doubt from his wording that his comment constitutes definite selection of a type species from the first species to be referred to the genus following its original description.

This nomenclatorial consideration appears to be well-founded. But a great deal of mystery still surrounds the identity of *dentatus* itself (apparently not seen since its first collection), and cannot at the present be resolved entirely. The following inferences from published information, however, may be of interest to other workers.

The original description of *Iulus dentatus* Olivier (1792, *Encyclop. method. insect.*, vol. 7, p. 417) is very brief, and gives little of systematic value. It states that the species is about twice the size of *Poly-*

*desmus complanatus* (ergo, about 50-60 mm. long), that the paranota are unequally dentate (that is, armed with several acute tubercles of variable size), and that each metatergite bears a transverse depression behind which are one or two rows of tubercles. The color is said to be reddish-brown, and the provenance of the type specimen stated to be Cayenne, French Guiana.

Nothing further is given, and it seems that later descriptions are but repetitions of Olivier's. Therefore, it appears likely that Gervais' association of the species with four genuine species of Platyrrhacidae was based upon an assumption of relationship rather than on personal knowledge that the pores in *dentatus* are on the upper side of the paranotum.

So far, only a single species of Platyrrhacidae [*Rhyphodesmus druii* (Gray)] has been obtained in the Guianas, or, for that matter, in all of northeastern South America. A specimen of this species at hand does not match Olivier's description in any respect except size. But a rather close concordance is to be found in the description of *Leptherpum zerneyi* (Attems, 1931, *Zoologica*, 30 (79): 48), a leptodesmoid species from northeastern Brasil. I do not suggest conspecificity of the two, but strongly suspect that both may belong to the same genus. Since *zerneyi* is clearly not congeneric with the type of *Leptherpum* (*carinovatum* Attems 1899), the status of that genus would not be affected by the possible location of *zerneyi* in *Stenonia*.

This supposition, of course, is one which can be settled only by extensive field work in the vicinity of Cayenne, to determine the extent of the diplopod fauna of that region and how many forms meet the few stipulations of the descriptions of *dentatus*.

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